

FUEL CELL POWER GENERATION SYSTEM

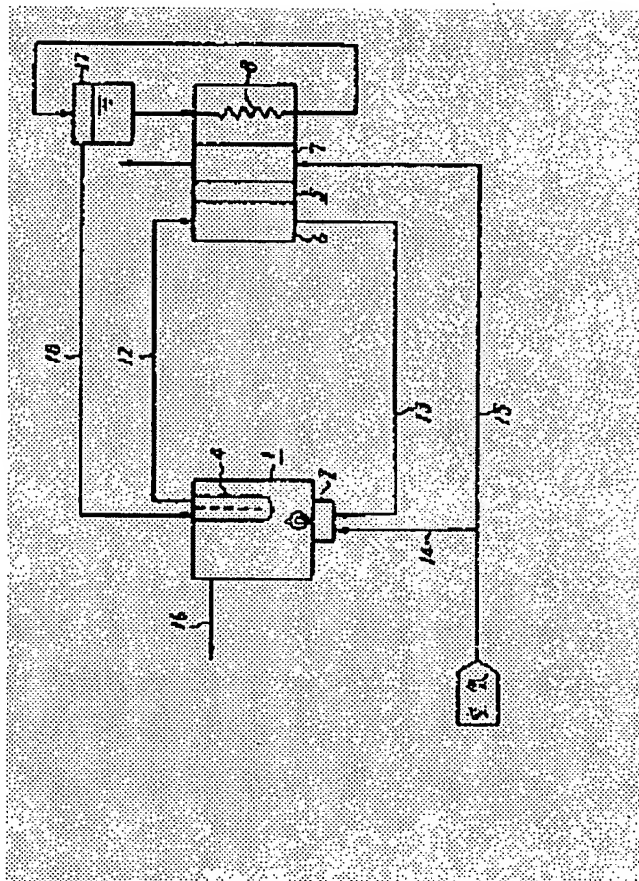
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Abstract of JP63034862

PURPOSE: To make the temperature control of a fuel reforming device easier, the evaporator unnecessary, and the system simpler, by unifying a liquid fuel tank and a coolant tank, and evaporating the fuel into a vapor to feed to the fuel reforming device.

CONSTITUTION: In a tank 17, a fuel mixing the water and methanol is stored, and pressurized to be the liquid condition at the temperature to feed to the cell as a cooling water. The fuel depressurized in a system 18 is evaporated, the resultant vapor is fed to a reaction tube 4 which is filled with a catalyst, and converted to a hydrogen-rich reformed gas by a steam reforming reaction and a water gas transformation reaction. The reformed gas is fed to a fuel chamber 6, and reacted electrochemically with the oxygen in the air fed to an oxidizer chamber 7 from a system 15, to output a DC power. And by letting the pressurized liquid fuel flow to a cooling tube 8, the cell temperature is kept constant.

Furthermore, the outlet gas of the fuel chamber 6 including the excessive hydrogen fed through a system 13, and the air fed through a system 14 are burned in a burner 2, a high temperature burned gas is produced to be used for heating the reaction tube 4, and exhausted to the outside through a system 16.



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